KENWOOD

KRC-868D

CASSETTE-RECEIVER
INSTRUCTION MANUAL

AMPLI-TUNER-LECTEUR DE CASSETTES
MODE D'EMPLOI

CASSETTEN-RECEIVER
BEDIENUNGSANLEITUNG

CASSETTE-RADIO
GEBRUIKSAANWIJZING

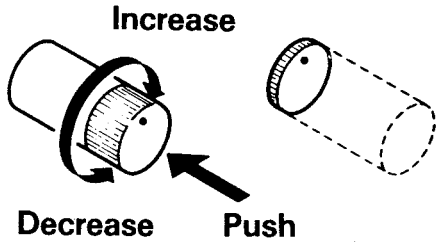
SINTO/LETTORE A CASSETTE
ISTRUZIONI PER L'USO

©PRINTED IN JAPAN B50-6893-00(E)(T)
88/12 11 10 9 8 7 6 5 4 3 2 1 87/12 11 10 9 8

Controls and indicators

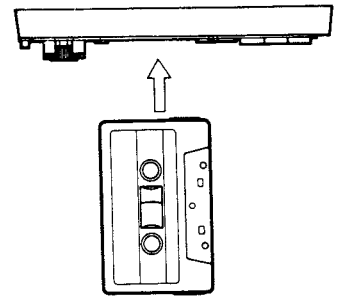
Bass, Treble control

Each time this knob is pressed, it stays out or in. It must be out to adjust the bass/treble response, and in when not in use.



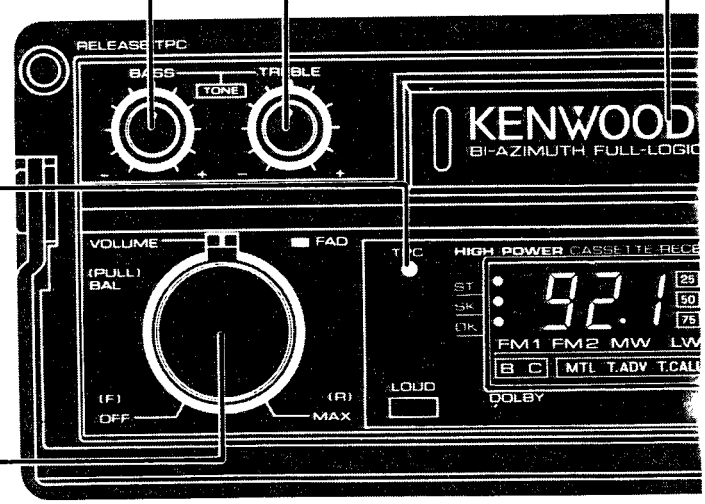
Cassette tape slot

When a cassette is inserted, it is automatically loaded, and playback starts. To engage key OFF eject, turn ignition key to OFF position and the tape is automatically ejected.

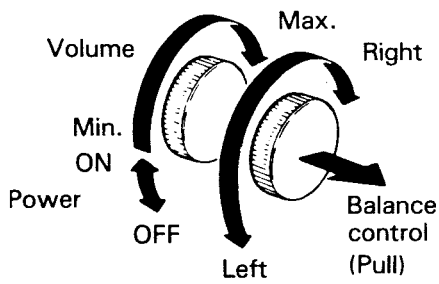


T.P.C. (Theft Prevention Chassis) indicator

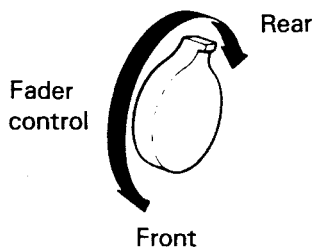
When inserting the unit into the detachable case, this indicator lights as a warning that the unit is not set correctly.
This indicator goes off when the unit is set correctly.



Power ON/OFF switch (Volume)



Fader control

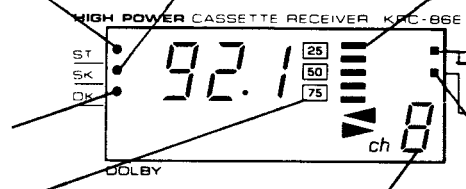


Fast Forward/Rewind/ Tuning switch

In Tape Play mode, each switch permits Fast Forward or Rewind operations.
In Tuner mode, when this switch is pressed with the Auto/Manual switch set to Auto, the unit automatically seeks the frequency, and stops when a marginal broadcast is received. In Manual mode, press this switch once to change the receiving frequency by one step. When this switch is kept pressed, the frequency changes continuously.

Digital display

Displays the frequency being received.



Lit when stereo broadcast is received.

Lit when SK broadcast is received.

Lit according to the received radio wave strength.

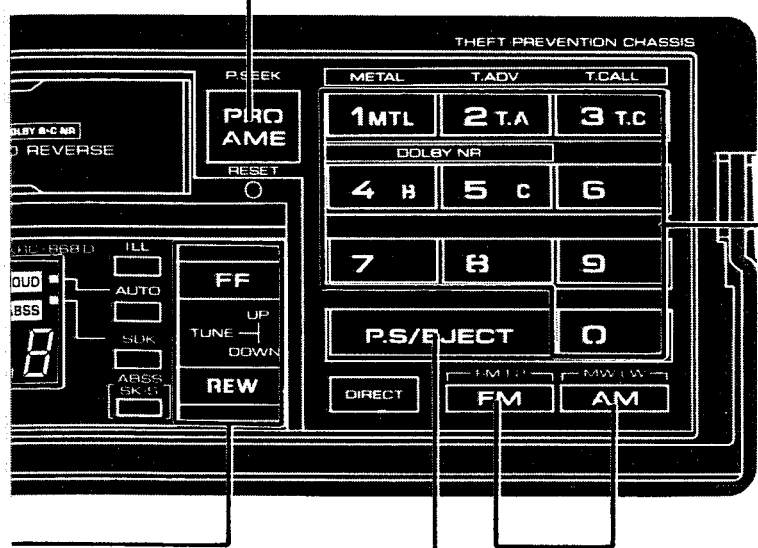
Lit when SDK switch in ON and traffic information is received.

Lit when the Auto/ Manual switch is set to Auto.

This is the auxiliary frequency display

Indicates the Preset Station Switch No. pressed.

Lit when the SDK switch is ON.



Program/Auto Memory/ Preset Seek switch

If this switch is pressed during playback, the tape direction is reversed. If this switch is pressed during Fast Forward or Rewind mode, the Fast Forward or Rewind mode is released and the unit enters Play mode.

In Tuner mode, when this switch is tapped once, the preset stations will each be received sequentially. When it is kept pressed, Auto memory operation will be activated.

Preset station switches (1 — 0)

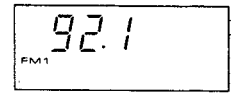
In Tuner mode, one switch can memorize one FM1, FM2 and one of either MW or LW.

Preset Scan/Eject switch

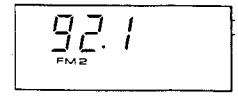
Pressing this switch during tuner operation will activate the Preset Scan mode. This will provide a 5 seconds sampling of each preset from the current listening memory bank. When desired station is reached, press Preset Scan switch again or corresponding Preset station switch to end Preset Scan mode. When this switch is pressed during tape playback, the cassette is ejected.

FM, MW, LW selector/Indicators

Selects reception band. Indicates the current receiving band.

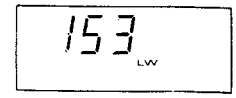


FM1



FM2

MW



LW

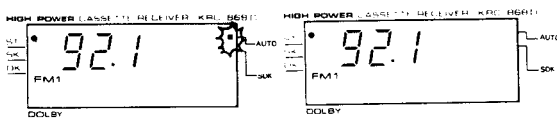
Controls and indicators

ENGLISH

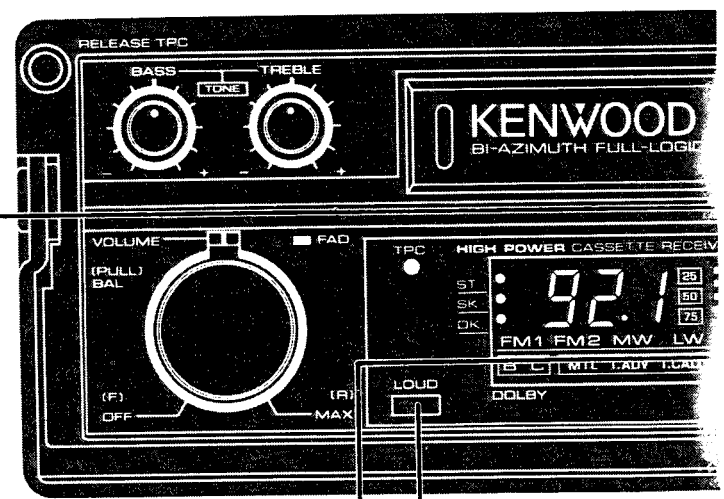
Illumination switch
This switch is used to select the illumination, between Green and Orange.

Reset button
When the installation and all the wirings are finished, press this button.
Not usually used. However, when the microprocessor (microcomputer) malfunctions, press this button using a sharp-pointed object (such as a pencil).
When this button is pressed, the unit is reset to its initial state. Therefore, all the memories need to be adjusted.

Auto/Manual switch
This switch is used to select the tuning mode between Auto (seek) and Manual.



Auto Manual



SDK switch
When this switch is set to ON, the SDK indicator illuminates and, if there is no SK station being received, the Up Seek operation is started to receive SK stations.

Loudness switch
When listening at a low volume, press this switch. The loudness circuit will compensate for the human ear's decreased response.

ABSS (Automatic Broadcast Sensor System)/SK seek switch
In Tuner mode with this switch ON, when the signal of the receiving station drops below a threshold level, auto-tuning will start to seek the nearest higher frequency the station with a stronger signal.
During tape playback with the SDK switch ON, pressing this switch starts SK upward seek operation.

Metal switch (Tape selector)

(Display)

In Tape Play mode, position for Metal, Chrome, or High Bias tapes (CrO_2) (70 μS EQ).

(Display)

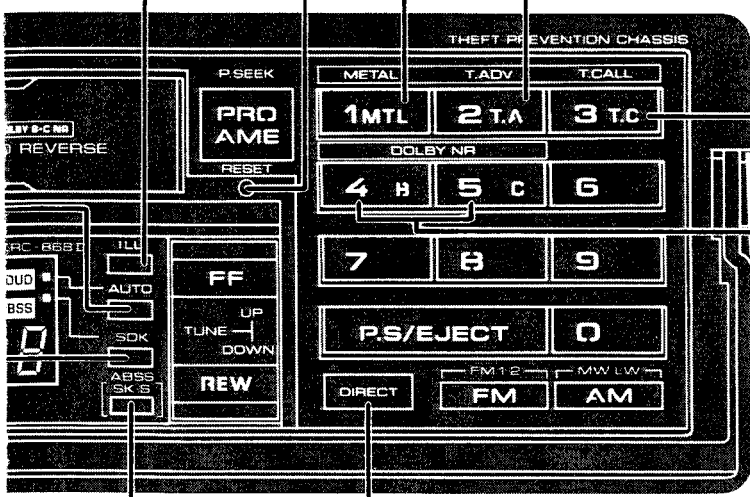
In Tape Play mode, position for Normal tapes (120 μS EQ).

Tape advance switch

In Tape Play mode, this switch allows you to locate the beginning of the next or current selection. Set to ON and Fast Forward or Rewind the tape.

ON

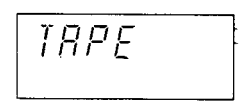
OFF



Tuner Call switch

In Tape Play mode, if this switch is ON, a radio broadcast can be heard during tape Fast Forward or Rewind operation. At this time, leave the Power switch on as well.

ON



OFF

Direct tuning switch

When this switch is pressed, the frequency of a broadcast can be directly input with the numeric keypad to tune to the desired station.

Dolby NR switches

In Tape Play mode, set this switch to ON when playing back a tape recorded with Dolby NR system

Dolby B ON

Dolby C ON

Dolby system OFF

Operation

■ Tape playback

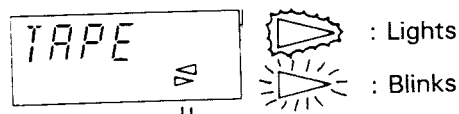
1. Turn the power ON.
2. When a cassette is inserted with the cassette shell opening at the right, playback starts.
3. Select the NR system and tape position according to the tape to be used.
4. When the Program switch is pressed, playback of the reverse side of the tape starts.
5. To stop playback, press the eject switch.

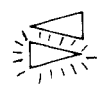
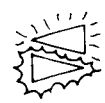
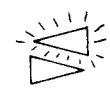
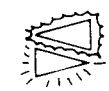
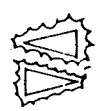
■ Illumination during tape playback

During tape playback, the Program, Fast Forward, Rewind, Metal, Tape Advance, Tuner Call, Dolby NR (B/C) and Eject switch colors are opposite to the color of display.

■ How to check the program indicator

- When a cassette tape is loaded with Side A facing upward, the program indicator will light or blinks depending on the condition as follows:



- **: While playing side A**
-  **: While fast-forwarding side A**
-  **: While rewinding side A**
- **: While playing side B**
-  **: While fast-forwarding side B**
-  **: While rewinding side B**
-  **: Pause mode switch occurs when traffic information is received during tape playback.**

■ Tape advance

The non-recorded portion of the tape is detected to locate the beginning of the selection for playback.

1. If you want to hear the selection you are listening to again from the beginning, press the Tape advance switch, and then rewind. The tape will stop rewinding at the beginning of the selection, and playback will recommence.
2. If you want to hear the selection following the one you are listening to, press the Tape advance switch, and then fast forward. The tape will stop at the beginning of the next selection, and playback will recommence.
3. It should be noted that the Tape advance function may not work correctly in the following cases:
   - Tapes where the unrecorded space between selections is less than 5 seconds.
   - Tapes where selections include passages with low recording levels lasting longer than 5 seconds.

■ Key-Off Eject

When the ignition key or Power switch is tuned off with the tape loaded, the tape will be automatically ejected about 3 seconds after to prevent damaging the tape or cassette mechanisms.

■ The KRC-868D incorporates Dolby NR B/C types system.

Dolby B type NR system

In general, Dolby NR refers to the B type noise reduction system. By encoding and decoding the higher frequency components of a small signal, the noise level can be reduced by a maximum of 10 dB.

Dolby C type NR system

The dynamic range is expanded by 10 dB compared with the B type noise reduction system. The anti-saturation circuit encodes and decodes higher level signals by a maximum of 3 dB to reduce distortion when the input signal level is high.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

■ Auto tuning (seek)

1. Turn the power ON.
2. Select the FM, MW or LW.
3. Set the Auto/Manual selector to Auto.
4. When the tuning switch is pressed, the unit starts scanning. When a marginal broad cast is received, the scanning stops.

■ Manual tuning

1. Turn the power ON.
2. Select the FM, MW or LW.
3. Set the Auto/Manual selector to Manual.
4. Using the Tuning switch, tune in to the required station frequency. Tap the switch once to vary the frequency one step, hold the switch to vary the frequency continuously.

■ Direct access tuning

1. Turn the power ON.
2. Select the FM, MW or LW.
3. Press the Direct tuning switch. "188.8" blinks in the frequency display for FM, "888" is displayed for LW, and "1888" is displayed for MW, for about 5 seconds.
4. While the frequency display is blinking, input the frequency number with the Preset station switches.
5. When the power of the station received by Direct access tuning is weak, the Up Seek operation is started if the Auto/Manual switch has been set to AUTO.
   - To tune to FM 87.9 MHz:

     Press ..... [8] / [7] / [9]
   - To tune to MW 1611 kHz:

     Press ..... [1MTL] / [6] / [1MTL] / [1MTL]

   Caution:
   Numbers other than a receiving frequency cannot be input.

■ Station memory

1. Turn the power ON.
2. Receive the FM1, FM2, MW or LW.
3. When the Preset station switch to be memorized is kept pressed for more than 2 seconds, the receiving station frequency will be stored in the switch pressed. After this, the memorized station can be recalled by tapping that switch once.

■ Auto memory

10 stations in the selected band can automatically be memorized.

1. Turn the power ON.
2. Select the FM1, FM2, MW or LW.
3. Press the Auto memory switch for more than 2 seconds.
4. The selected band is automatically scanned and 10 stations are memorized. When 10 stations are memorized, the auto memory function is automatically released.

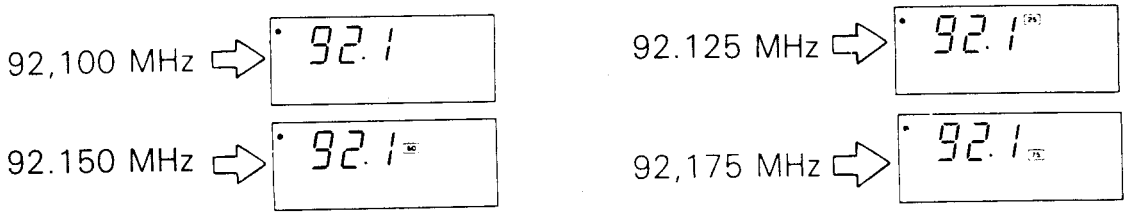
■ How to perform preset scanning

1. Store a station frequency for each one of 1 to 0 Preset station switches.
2. When the Preset Scan switch is pressed while the Auto/Manual switch is ON, only the very strong broadcasting station Preset by the Preset station switches are monitored in sequence for 5 seconds each. When the Auto/Manual switch is OFF, all 10 preset channels are monitored. The station being monitored is shown in the Preset station switch No. display.
3. When the required station is received, press the Preset Scan switch again, or press the Preset station switches. The switch No. is shown in the Preset station switch No. display.

■ Frequency display

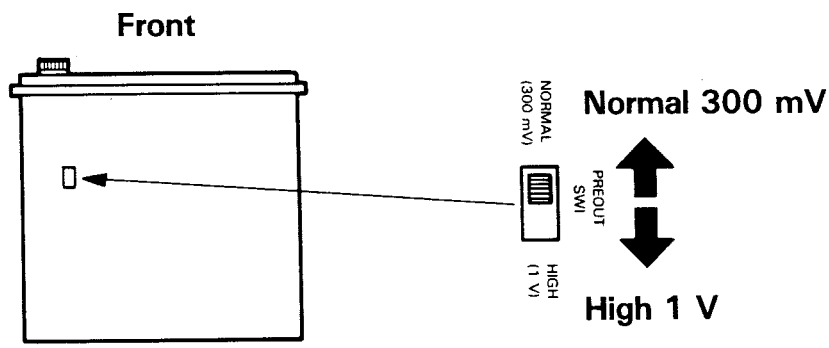
- For FM, final frequencies 25 kHz, 50 kHz and 75 kHz are represented respectively by 25 , 50 , and 75 on the frequency display.

For example:



- When the channel space is changed, the memorized contents are stored and the display turns green.

■ Preamp output voltage selector (Bottom view)



■ Toward the new channel plan of LW stations

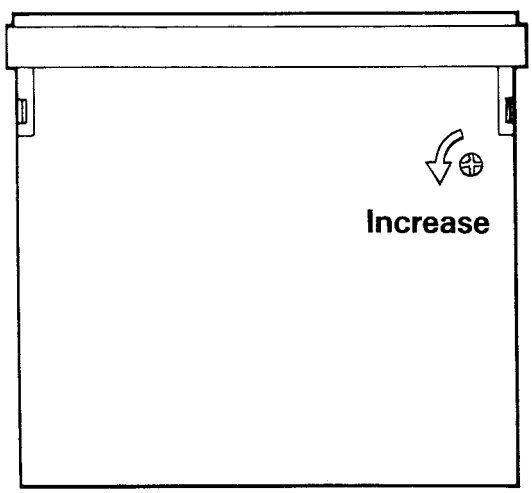
Starting from February of 1986 the LW broadcast stations will start shifting its broadcasting frequencies by 1990. For this reason, the KRC-868D incorporates LW frequency range of 153 kHz ~ 279 kHz (in auto tuning mode). If the desired station has not yet changed its frequency to the new channel plan, use the manual tuning facility to tune in. This frequency can also be preset in the memory.

■ How to use SDK switch

1. Turn the power ON.
2. Set the SDK switch to ON and tune to the required station. When the receiving station is a traffic information, the SK indicator lights up.
3. When traffic information is received, DK indicator is light and the volume level is automatically increased toward the set point in the drawing below and the information can be heard distinctly.
4. To listen to traffic information at the same level, set the SDK switch to OFF.

To listen to traffic information during tape playback

1. Turn the power ON.
2. Load a cassette tape. Set the SDK switch to ON. The SDK indicator lights up.
3. When traffic information starts, the unit enters FM reception mode and traffic information can be heard.
4. When traffic information is over, the unit automatically returns to tape playback mode.
5. To listen to a tape even when traffic information starts, set the SDK switch to OFF after receiving the SK station.



(Top view)

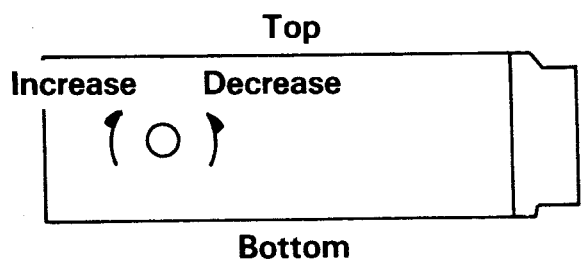
- The volume level can be adjusted according to your preference.

When the beep tone sounds

■ **This unit generates beeps in the following cases.**

Operation	Number of Beeps
When a cassette tape is loaded	Once
When a cassette tape is ejected	Once
When storing into the 10-key memory	Once
When direct tuning is finished	Once
When Auto Memory starts	Once
When a program is stored with Auto Memory function	Once
When Auto Memory finishes	Twice
When the ABSS function starts	Twice
When the ABSS function is released after a 2-cycle operation	Twice
When Preset Scan finishes	Twice
In model equipped with electronic volume	
In balance or fader adjusting mode: ➡ When the tone key is pressed ON	Once
In treble or bass adjusting mode: ➡ When the position key is pressed on	Once
In tone or position adjusting mode: ➡ After 5 seconds	Once
When the power switch is turned OFF	Once
When the SK Seek function finishes after a 2-cycle operation	Twice

■ **The volume of the beep sound can be adjusted using the control on the side of this unit.**



Care and maintenance

- The power source of this unit is exclusively DC 12 V, negative ground. If you wish to mount the unit on a vehicle with DC 24 V, please consult your appointed KENWOOD dealer.
- Do not place the cassette receiver in a place where the cassette receiver may be exposed to direct sunlight, heat or moisture. Be careful that metal objects and water do not enter the set.
- If you have difficulty in installing the set in your car, please contact your KENWOOD dealer.

Notes on handling tape

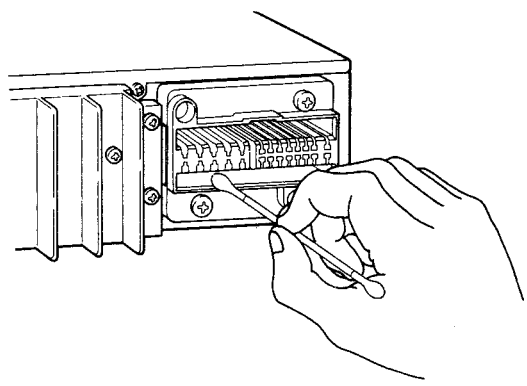
- Before loading a cassette, check the tape for slack. If there is slack tape, remove it using a pencil.
- Do not expose the cassette tape to direct sunlight. Leaving a cassette at high temperature or humidity can deform the cassette shell or tape.
- 120-minute tape is very thin. Avoid its use, because it can easily be twisted around the pinch roller.

Head cleaning

Magnetic particles from the tape adhere to the head surface after a long period of use, resulting in noise and poor quality sound. Clean the head with cleaning tape available at your stereo shop. And follow the directions with the head cleaner.

CAUTION:

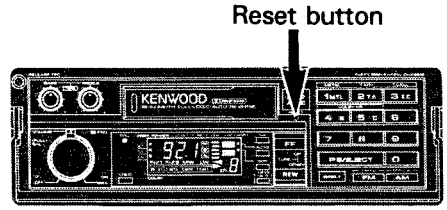
- The KRC-868D includes a lithium backup battery to retain memory in the microprocessor. If the unit can not no longer retain its memory, this lithium battery may have been discharged. In this case, bring the unit in to our authorized service center. This backup lithium battery life is estimated at about 7 years.



The connection at the rear sometimes makes poor contact when the unit is detached frequently. Periodically wipe the connector with a cloth moistened with alcohol.

• When your set malfunctions

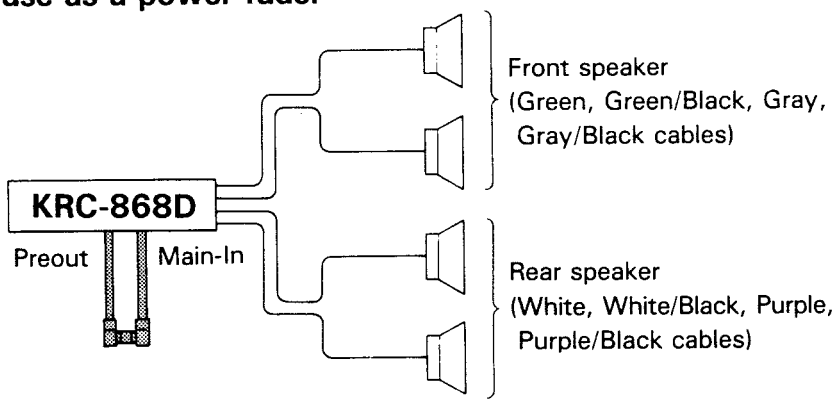
If your set malfunctions or operates abnormally, first press the Reset button. If the malfunction persists, leave the set as it is and please call your dealer.

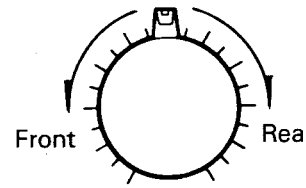


■ Fader control

When a 4-speaker system is constructed using the fader control, 3 types of operation are possible as follows.

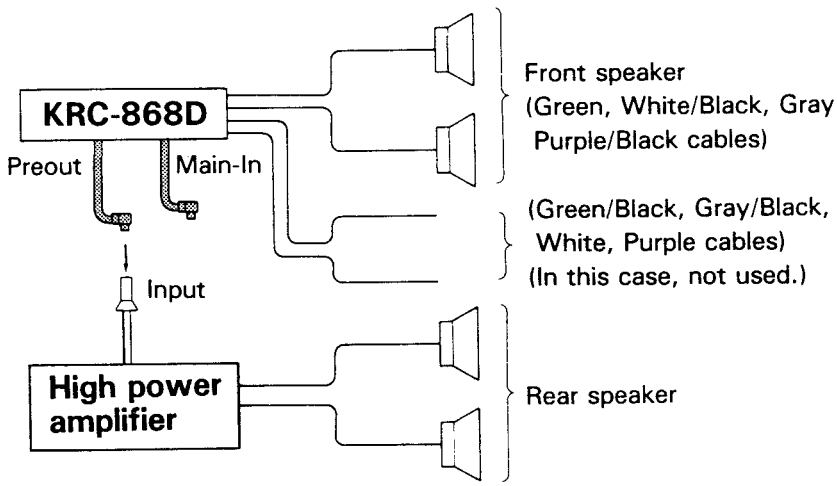
1. To use as a power fader

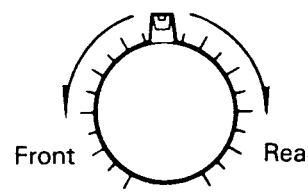




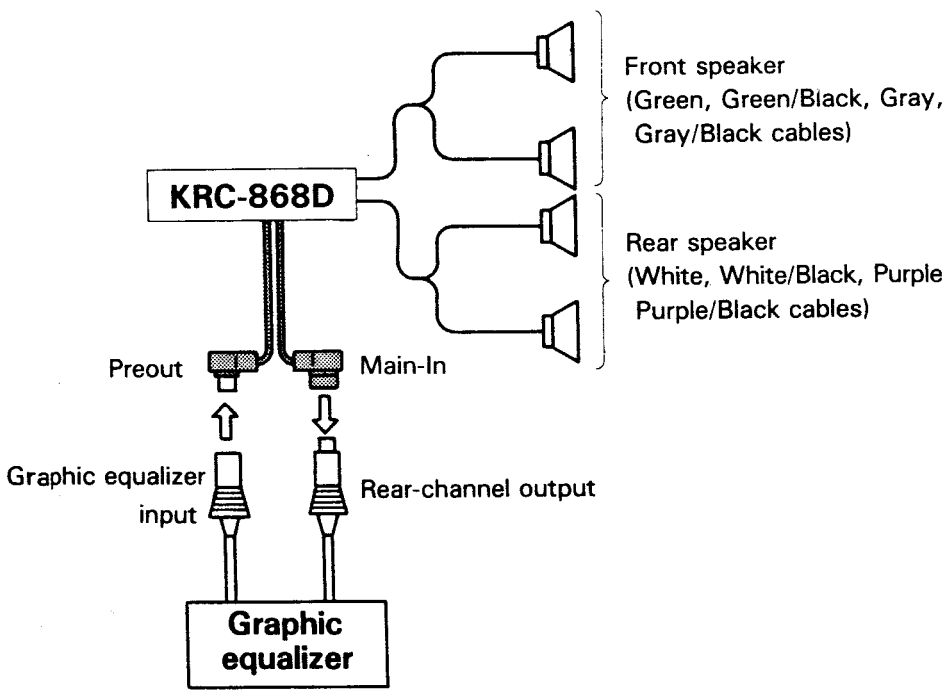
Fader control

2. To use as a preout fader

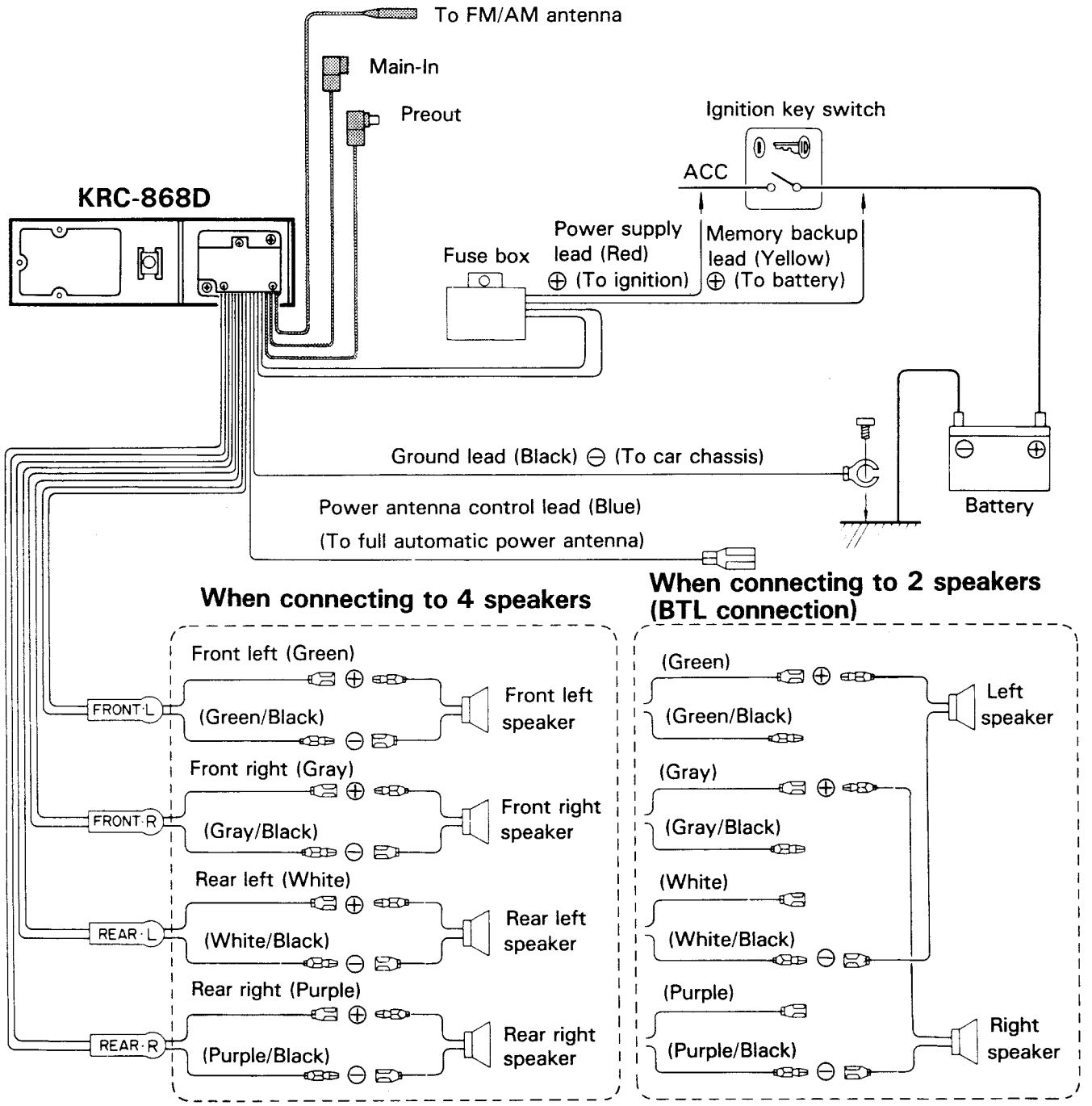




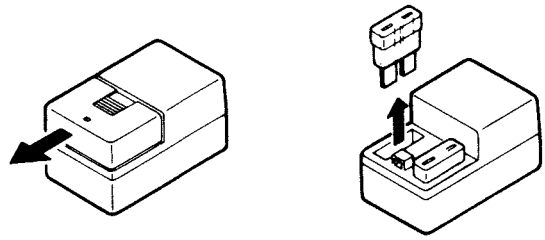
Fader control



Connection



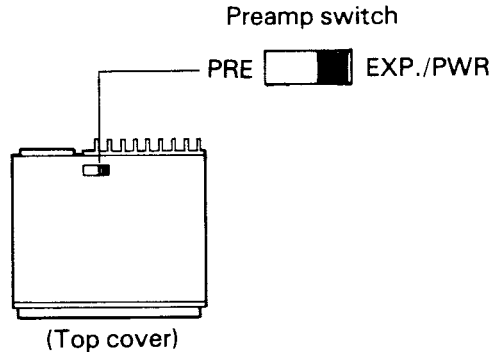
- As the unit uses BTL output, always connect the black stripe speaker wires to the ⊖ terminals of the speaker systems. Never let the black stripe speaker wires touch and never connect them to the chassis (ground). Do not let the speaker terminals come into contact with the chassis (ground).
  Insulate any unused output wire with vinyl tape to prevent a short circuit.
- Arrange unconnected cords properly so that they do not contact the vehicle chassis.
- When a fuse is blown, first check that the associated cords are not short-circuited, then replace the fuse with a new one having the same capacity.



ENGLISH

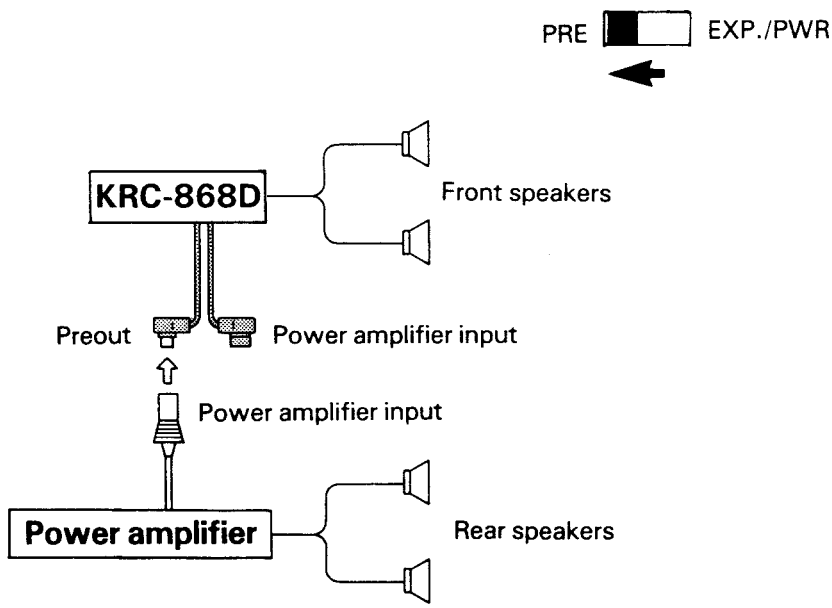
KRC-868D Connection diagrams for upgrading systems

■ The KRC-858 has a Preamp (preamp separation) switch which enables the system to be upgraded in various ways as follows:



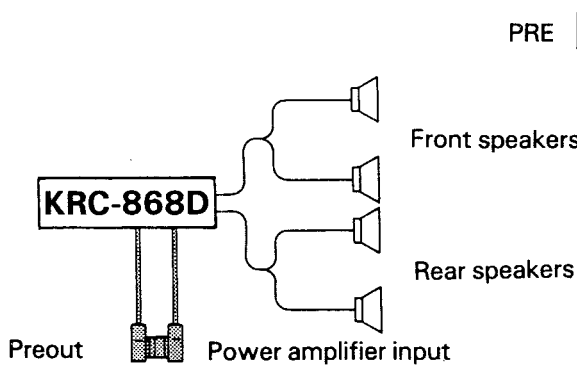
■When the switch is set to the PRE side:

- When a KENWOOD power amplifier is used



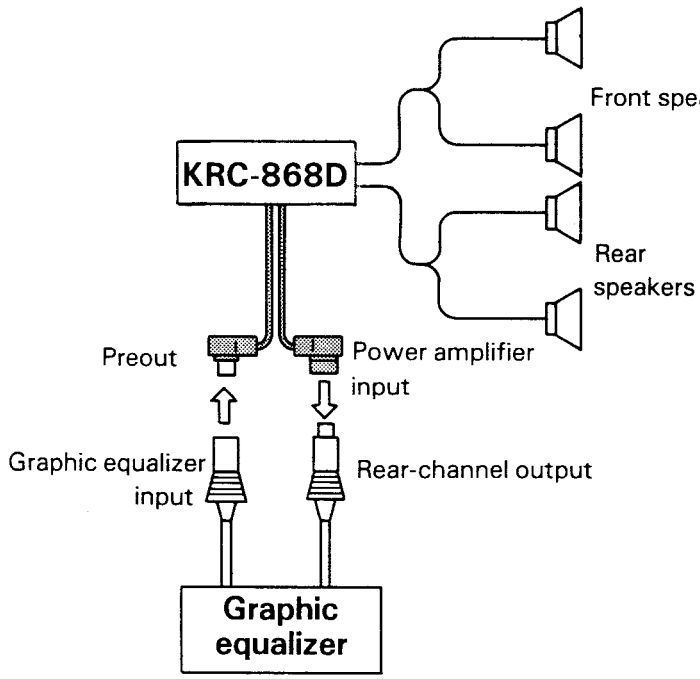
■ When the switch is set to the EXP./PWR position:

- When the built-in amplifiers are used (power fader control is possible)



Note:
When the pre-fader control is set all the way to the front, sound will not be output. Set it to the center position.

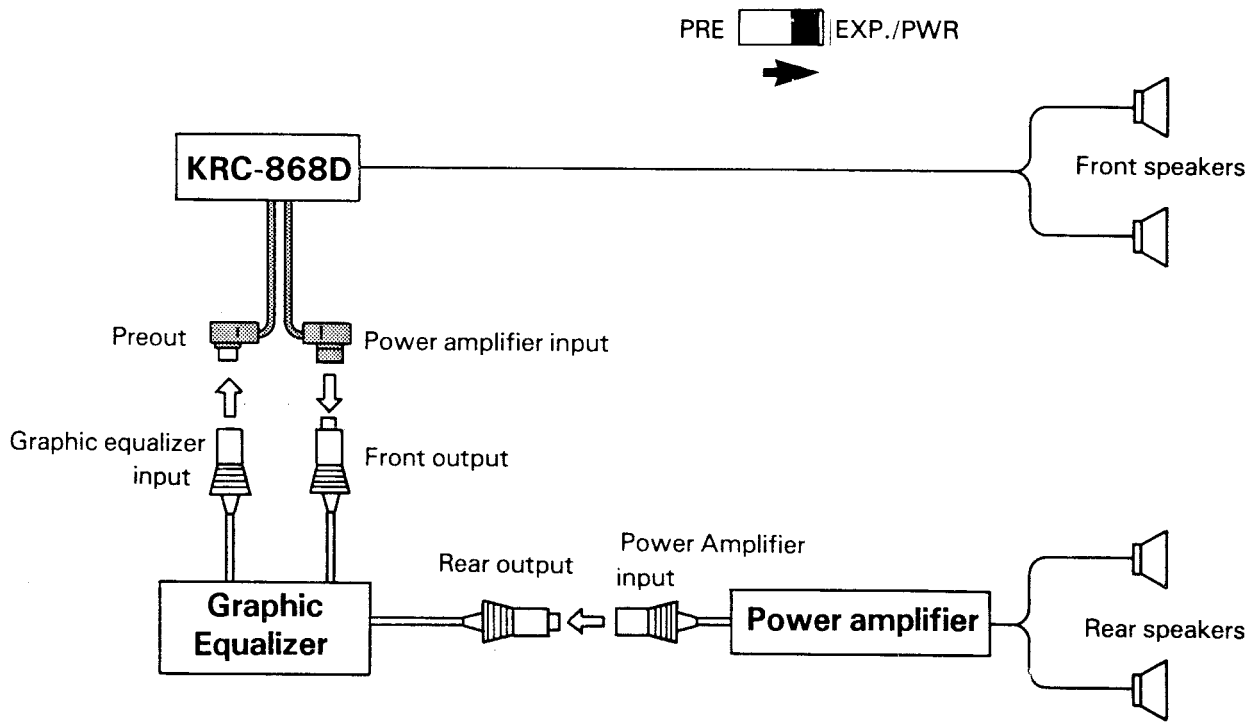
- When a KENWOOD graphic equalizer is connected to this unit (Power fader control is possible)



Note:

When the pre-fader control is set all the way to the front, sound will not be output. Set it to the center position.

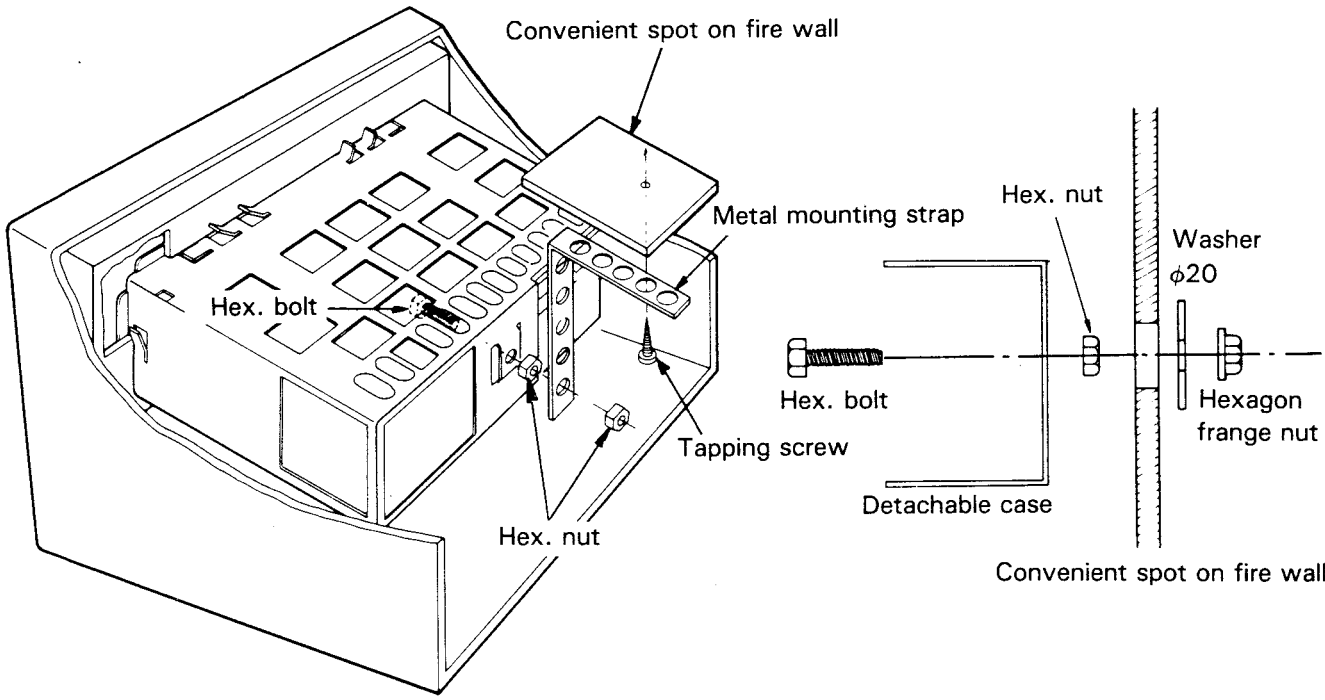
- When a KENWOOD amplifier and graphic equalizer are connected to this unit (Fader control is possible with the fader function provided on the Graphic equalizer)

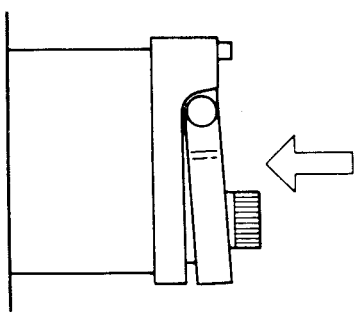


ENGLISH

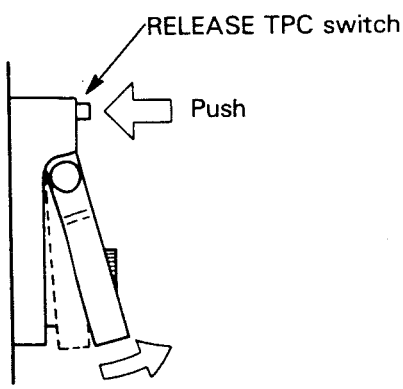
Installation

1. Insert the detachable case into the console and clamp with the claws. If the detachable case cannot be inserted, cut off the console with a file.





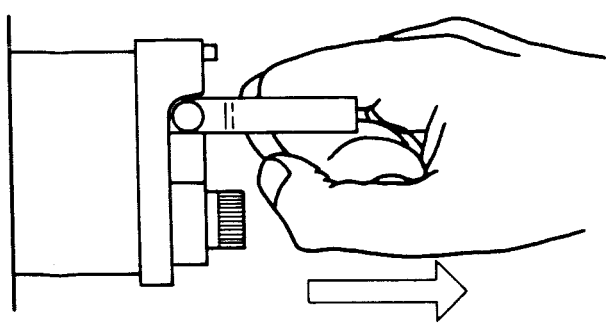
2. Insert the unit into the detachable case.



3. To remove the unit, press the RELEASE TPC switch to raise the handle, then pull out.

CAUTION

Be sure to turn the power switch off when installing or removing.



Specifications

Specification subject to change without notice.

FM Tuner Section

Frequency Range	87.5 ~ 108.0 MHz
Usable Sensitivity (DIN)	1.1 μV/75 ohms
Stereo Sensitivity (S/N = 46 dB)	1.6 μV/75 ohms
Frequency Response (±4.5 dB)	30 ~ 15,000 Hz
Signal to Noise Ratio (IEC-A)	70 dB
Selectivity (DIN)	70 dB
Stereo Separation (1 kHz)	40 dB
19 kHz Carrier Leakage	50 dB

MW Tuner Section

MW Frequency Range	531 ~ 1,611 kHz
MW Usable Sensitivity	30 μV

LW Tuner Section

LW Frequency Range	153 ~ 281 kHz
LW Usable Sensitivity	60 μV

Cassette Deck Section

Tape Speed	4.76 cm/s
Wow and Flutter (WRMS)	0.12% (WRMS)
Wow and Flutter (DIN)	0.2% (W-PEAK)
Fast Winding Time (C-60)	100 sec
Frequency Response (120 μs)	30 Hz ~ 16 kHz (+4 dB, −6 dB)
(70 μs)	30 Hz ~ 18 kHz (+4 dB, −6 dB)
Stereo Separation (1 kHz)	40 dB
Signal to Noise Ratio (IEC-A)	
NR OFF	55 dB
Dolby-B	65 dB
Dolby-C	72 dB

Audio Section

Maximum Output Power (1 kHz, 4 ohms)	20 W + 20 W
Rated Output Power (10% THD, 1 kHz, 4 ohms)	15 W + 15 W
(1% THD, 1 kHz, 4 ohms)	10 W + 10 W
Tone Action	Bass: 100 Hz ±10 dB
	Treble: 10 kHz ±10 dB
Preout Level/Impedance	Normal: 300 mV/180 ohms
	High: 1,000 mV/180 ohms

General

Operating Voltage (GND)	14.4 V (11 ~ 16 V)
Current Consumption	4.5 A at Rated Power
Dimensions (W × H × D)	188 × 58 × 177 mm
	(7-3/8 × 2-5/16 × 6-15/16 in.)
Body Size (W × H × D)	182 × 52 × 159 mm
	(7-3/16 × 2-1/16 × 6-1/4 in.)
Weight	2.1 kg (4.6 lb)